Nursery Pest Newsletter

Plant Protection and Weed Control
Kansas Department of Agriculture
PO Box 19282, Forbes Field, Bldg. 282
Topeka, Kansas 66619
www.ksda.gov/plant_protection/
Phone: (785) 862-2180 FAX: (785) 862-2182

Spring 2011

Bacterial Leaf Scorch (BLS) Of Landscape Plants and Grape

Jon Appel, Plant Pathologist

In 2010, Oklahoma reported five counties with new records of Pierce's disease of grapes in vineyards. This disease is part of a complex of diseases that affect a wide range of hosts including such plants as oaks, sycamore, maple, mulberry, oleander and grapes. The disease is caused by a xylem-inhabiting bacterium known as *Xyllella fastidiosa* and transmitted from plant to plant by a group of insects known as leafhoppers. The bacteria plugs up the water transporting cells of the plants and under water stress of summer and late fall, plants develop scorch symptoms. Plant vigor declines and eventual death of the tree or plant may occur. For more information go to: www.usna.usda.gov/Research/BacterialLeafScorch.html

Pierce's disease of white grape (PD/GWSS)

Kansas receives a lot of nursery stock from out of state including Oklahoma and other southern states where the disease is more widespread and is becoming more prevalent. Nursery stock is a considerable threat in spreading this disease within the state. Once brought into a nursery situation, the plant harboring the fastidious bacteria may serve as a source of infection if leafhoppers are present. Pierce's disease is especially a concern to grape growers either hobbyist or commercial.

What makes a plant a suspect? We are all aware of scorch symptoms in Kansas from high summer temperatures and winds. Those plants typically have symptoms that are uniform on plants concerning the position of the scorched leaves on the tree, uniform margin scorching and color. With bacterial scorching, scorched margins of leaves vary in appearance, leaves will sometimes have a yellow margin from green leaf tissue to the brown dead tissue and the position of scorched leaves in the canopy are non uniform. A high number of leafhoppers can also be a clue. Confirming the disease requires laboratory testing to distinguish BLS from environmental, other disease or herbicide injury. Note: The BLS symptoms vary from leaf to leaf as opposed to the horse chestnut image where scorch (brown tissue) is uniform on margins.

Horse chestnut with heat scorch

Mulberry with BLS, Hays

Damping-Off Of Greenhouse Plants:

With greenhouse production upon us, now is a good time to say something about our number one blight to green house production – damping off (DO). It is important to understand that DO fungi generally attack the seed, seedling or older plant when conditions are not optimal for growth. The DO fungi attack roots and lower stem

Close up of a geranium with mineral deficiency and discolored roots (arrow). The roots should be white with lots of root hairs and secondary branching.

tissue as a rot. Placing plants on cold floors, overwatering, poor drainage and lack of sanitation are contributing factors. Plants will exhibit poor germination, mineral deficiency, wilting, stunting and death from the disease. For control, a number of fungicides are on the market that are very good and should be considered in a prevention program – yes prevention! Growers can recognize plants or flats rotting and dispose of them before the disease spreads. Splashing or free water and fungal gnats can move the disease to nearby plants. The complex is a regulated pest problem but more importantly can absolutely ruin a crop if unchecked. Often our inspectors will see DO severely affected flats or plants that growers do not throw out, sitting in the center of infection in a greenhouse.

Growers should run plants dry when possible, start plants on raised benches and control fungal gnats with insecticides or other means. The larvae in the soil feed on roots opening up wounds for damping off fungi of *Pythium*, *Phytopthora*, and *Botrytis*-gray mold.

Zonal geraniums with damping off – symptoms: plants are missing or rotted, mineral deficiency is seen with yellowing/ purpling of leaves and stunting. Plants on the ground are at risk to DO because soil temperatures are lower and air circulation is poor.

PINE WILT:

It is important to get rid of the dead pine trees in your production fields before Spring. Pine wilt is likely the cause of those dead pine trees and harbors the pine sawyer. The insect transmits the disease causing nematode in summer and fall. The dead pine tree serves as a "nest" for the larvae in the winter. Destroy the wood by chipping, burying, or burning and reduce the disease pressure for next year, increasing production. You may call your KDA area inspector for sampling instructions and we can provide free testing for the nematode, if desired.

Japanese Fleece-flower, an Invasive Plant from the Garden

Darin L. Banks, Weed Specialist

Japanese fleece-flower (*Fallopia japonica*) is a non-native, semi-woody perennial native to eastern Asia. The plant is widely distributed throughout the United States (being found in 43 states). Japanese fleece-flower was first introduced into the United States during the late 1800s as a garden ornamental. It can survive in USDA hardiness zones 4 to 9, especially in areas with 20 inches or more of rainfall and along riparian areas having less than 20 inches of rainfall.

The plant is physically impressive, forming large clumps of reddish-brown stems that grow 3 to 10 feet in height. The large (4 to 6 inches long and 3 to 4 inches wide) leaves alternate along the stem at swollen nodes giving the plant a bamboo-like appearance. This look provides the basis for several of the plants other common names including Japanese bamboo, American bamboo, Mexican bamboo, and Japanese knotweed. Japanese fleece-flower produces very small, white flowers in plume-like clusters at the base of each leaf during August and September. The plant reproduces both vegetatively (roots) and seeds, making it extremely difficult to control.

Growth habit and leaf shape

Flower clusters

Japanese fleece-flower grows very rapidly and aggressively by an extensive root system of underground stems called rhizomes to form dense thickets. The plants root system is especially destructive along riparian areas where it establishes monocultures that die back in the winter leaving banks exposed and increasing the risk of flooding and river bank erosion. The invasive rhizomes and shoots can also damage foundations, walls, drainage works, flood structures, and driveways having been shown to grown through 2 inches of asphalt if conditions are correct.

Although not regulated in Kansas, Japanese fleece-flower and giant fleece-flower (*Fallopia sachalinenis*), including any cultivars (such as '*variegata*') and hybrids such as

Bohemian fleece-flower (*Fallopia ×bohemica*) were recently declared noxious weeds in Nebraska. Under the Nebraska Noxious Weed Control Act, the spread and propagation of Japanese and giant fleece-flower and any cultivars and hybrids must be controlled beginning February 1, 2011, including restrictions on shipments of the plants into Nebraska.

Rhizomes


Japanese fleece-flower cultivar 'variegata'

For more information concerning noxious weeds and quarantined plants please contact us at (785) 862-2180 or go to www.ksda.gov/plant_protection/content/360.

Nursery Pests

Glenn A. Salsbury, Entomologist

Question: What do the following insects have in common?

Red imported fire ant: an important pest both ecologically and as a human health issue.

Pavement ant: A highly aggressive ant that can sting and can be found in a number of nurseries in Northeast Kansas and one location in Southeast Kansas. The presence of this pest has resulted in complaints from purchasers of nursery stock.

Japanese beetle: The larva is a pest of turf and the adults are defoliators and will attack some fruit. In 2010 it was confirmed in a vineyard in Southeast Kansas.

Whitefringed beetle: An important pest of vegetables.

White pine pitch midge: Minor pest of white pines and is not known to be established in Kansas.

Chestnut brown bark beetle: This is a pest of pines and was intercepted for the first time in 2009. The status of this insect in Kansas is not known.

Oriental beetle: This is a turf pest and not yet known to be established in Kansas.

Juniper root weevil: Minor pest of junipers and has been intercepted several times but the status in Kansas is not known.

Rough strawberry root weevil: This is a pest of many kinds of plants and is established in several counties in Kansas. The adults are flightless.

Black vine weevil: Pest of a large number of plant species and is well established in Kansas especially in the Northeast.

Strawberry root weevil: As with the preceding two species there are a large number of host plants for this pest but it is less common than the black vine weevil.

Pale green weevil: The status of this pest in Kansas is not known but was intercepted one time from imported nursery stock.

Pales weevil: This is a pest of pines, especially newly lined out trees.

Various scales: A large number of species have been intercepted over the years which include the cactus scale and euonymus scale.

Other important pests such as the Carolina sawyer and the eastern 5-spined Ips may have been imported or moved into the state through natural migration but both of these insects are important pests of pines.

Answer: All have been imported into Kansas in nursery stock.

The above list is only a sampling of pests brought into the state in nursery stock. This is why it is important to purchase stock from reputable sources.

Colorado Japanese Beetle Quarantine

Jeff Vogel, Program Manager

The Colorado Department of Agriculture updated the Japanese beetle quarantine requirements in December 2010 for all nursery stock entering their state. Some of the changes may require a Kansas nursery to adjust their management strategy to facilitate shipment into Colorado. Please contact your area inspector for further information.

Retired Staff

Glenn Salsbury, state entomologist for the Kansas Department of Agriculture's Plant Protection and Weed Control program retired in March.

Salsbury worked 34 years for KDA. He holds a Bachelors and Masters from Kansas State College of Pittsburg. He was an area specialist in the south central and southwest part of the state for 19 years and then the state entomologist for 15 years.

Area Staff

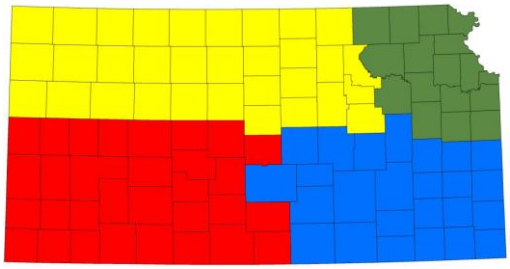
Northwest Kansas
Bob Buhler
115 N 3rd
Osborne, KS 67473
(785) 207-1507 (M)
bob.buhler@kda.ks.gov

Southwest Kansas
Terry Clarkson
10506 W River Road
Pratt, KS 67124
(785) 256-3849 (M)
terry.clarkson@kda.ks.gov

Northeast Kansas
Tom Sanders
PO Box 19282
Forbes Field, Bldg. 282
Topeka, KS 66619
(785) 207-0582 (M)
tom.sanders@kda.ks.gov

South Central Kansas
Cherie Copeland
2728 W 17th Street
Wichita, KS 67203
(785) 207-0580 (M)
cherie.copeland@kda.ks.gov

Southeast Kansas
Vacant
(Currently covered by Cherie Copeland)



State Staff

PO Box 19282, Forbes Field, Bldg. 282, Topeka, KS 66619

Jeff Vogel
Program Manager
(785) 862-2180
(785) 207-0586 (M)
jeff.vogel@kda.ks.gov

Darin Banks
Weeds Specialist
(785) 862-2180
(785) 207-2118 (M)
darin.banks@kda.ks.gov

Sarah Bailey
Administrative Assistant
(785) 862-2180
sarah.bailey@kda.ks.gov

Laurinda Ramonda
CAPS Coordinator
(785) 862-2180
(785) 580-9194 (M)
laurinda.ramonda@kda.ks.gov

Entomologist
Call (785) 862-2180

Export Specialist
Vacant

Jon Appel
Plant Pathologist
1711 Westbank Way
Manhattan, Ks 66503
(785) 537-3155 (M)
jon.appel@kda.ks.gov

Kansas Department of Agriculture
Plant Protection and Weed Control
PO Box 19282
Forbes Field-Building 282
Topeka, KS 66619-0282

046-13